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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,272	05/10/2005	Robert David Eden	081476-0312356/NSP/PAC/P0	5371

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EXAMINER

HOOK, JAMES F

ART UNIT

PAPER NUMBER

3754

MAIL DATE

DELIVERY MODE

07/08/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/509,272

**Applicant(s)**

EDEN, ROBERT DAVID

**Examiner**

James F. Hook

**Art Unit**

3754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 and 25 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 5-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 19-22 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 19-22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maly in view of Allen. The reference to Maly discloses the recited apparatus for forming a plug comprising a carrier 10, two spaced apart portions 11 for sliding fit and forming a gap, a body of material with a melting point higher than the temperature within the passageway 15a where the means is provided for melting the material to fill the gap, the melting material expands as it solidifies, the obstructing means is formed as rings 14 provided in grooves in members 11, and the method of using such to plug a pipe where cooling fluid such as water can be provided through the member 10, and where inherently the thinner material in the gap between the rings and the wall would solidify faster since there is less material to retain heat. The reference to Maly discloses all of the recited structure with the exception of providing a body of expanding bismuth alloy at the point which the passageway is to be sealed. The reference to Allen discloses that it is old and well known in the art to form a plug comprising a carrier 18 provided with a heating element, a portion 24 for sliding fit, a body of material with a melting point higher than the temperature of the passageway 27 formed of a bismuth alloy material which melts and expands as it solidifies to block the

passage above the member 24 at the point where the passageway is to be sealed. It would have been obvious to one skilled in the art to modify the plug in Maly by providing a body of expanding bismuth alloy at the point which the passageway is to be sealed as suggested by Allen where such would allow for a plug of longer length which could withstand higher pressures.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maly in view of Allen as applied to claims 1, 2, 19-22, and 25 above, and further in view of Feldhoff. The reference to Maly as modified discloses all of the recited structure with the exception of forming the ring as a C shaped ring. The reference to Feldhoff discloses the use of rings in grooves of sealing members, where the rings can be either solid with no breaks or can be formed as a C-shaped ring as well. It would have been obvious to one skilled in the art to modify the ring in Maly as modified by forming such as a C shaped ring where such is an equivalent form of a ring used in a groove of a sealing apparatus as suggested by Feldhoff where such would allow for easier insertion of the ring into the apparatus and is a known equivalent form the ring can take.

Claims 1, 2, 19-22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen in view of Maly. The reference to Allen discloses all of the recited structure with the exception of providing more than one portion for sliding fit. It would have been obvious to one skilled in the art to modify the plug of Allen by providing a second sliding portion as suggested by Maly where such would inherently better limit where the bismuth alloy was kept to insure a better seal.

***Response to Arguments***

Applicant's arguments with respect to claims 1, 2, 19-22, and 25 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James F. Hook whose telephone number is (571) 272-4903. The examiner can normally be reached on Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on (571) 272-4720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James F. Hook/  
Primary Examiner, Art Unit 3754

JFH